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TO:	Examiner Kagnew Gebreyesus		
FIRM:	USPTO		
FACSIMILE NO.:	571 273 2937		
OUR REF.:	NEWKO1.001C1		
YOUR REF.:	U.S. APPL. NO.: 10/600,689		
FROM:	Mincheol Kim		
OPERATOR:	Haejin Chang	NO. OF PAGES: 26	(incl. cover sheet)
DATE:	March 4, 2005	TIME:	

Dear Examiner Gebreyesus:

Following our telephonic conversation, attached are the applicant's proposed claim amendments in reply to your proposed claim amendments. Also attached is an English translation of the Korean priority application No. 2000/80608. Please call me if you have any questions or need additional information.

Sincerely,

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APPLICATION NO. 10/600,689

(NEWKO1.001C1)

PROPOSED CLAIM AMENDMENTS

TO EXAMIER KAGNEW GEE REYESUS

Fax: 571 273 2937

1-7. (Canceled)

8. (Currently amended) An isolated arabinose isomerase polypeptide comprising SEQ ID NO: 4 encoded by a polynucleotide ~~arabinose isomerase isolated~~ from *Thermotoga neapolitana*.

9. (Currently amended) An isolated polynucleotide ~~polypeptide~~ comprising SEQ ID NO: 3 that encodes for an arabinose isomerase polypeptide ~~encoded by a nucleotide derived~~ from *Thermotoga neapolitana*.

10. (Currently amended) The isolated polynucleotide ~~polypeptide~~ of Claim 9, wherein said arabinose isomerase has the amino acid sequence of SEQ. ID NO: 4.

11. (Currently amended) The isolated polypeptide of Claim ~~8~~10, wherein said polypeptide is attached to~~further comprising~~ a solid support.

12. (Original) The isolated polypeptide of Claim 11, wherein the solid support is a silica bead.

13-15. (Canceled)

16. (Currently amended) An arabinose isomerase produced by a method comprising:

providing a host cell transformed with the polynucleotide sequence SEQ ID NO: 3 ~~an expression vector comprising a nucleotide derived~~ from *Thermotoga* neapolitana~~, the polynucleotide coding for an arabinose isomerage~~ and

culturing the host cell in a medium, thereby producing an ~~the~~ arabinose isomerase.

17. (Currently amended) A method of producing tagatose, comprising:

providing the isolated polypeptide of Claim ~~8-9~~; and

admixing the arabinose isomerase with galactose, thereby causing a reaction and producing tagatose.

18. (Original) The method of Claim 17, wherein the reaction is carried out at a pH from about 5 to about 8.

19. (Original) The method of Claim 17, wherein the reaction is carried out at a temperature from about 50°C to about 100°C.

20. (Original) The method of Claim 19, wherein the reaction is carried out at a temperature from about 70°C to about 95°C.

21. (Original) The method of Claim 17, wherein the isolated polypeptide is attached to a solid support.

22. (Original) The method of Claim 21, wherein the solid support is a silica bead.

23. (Original) The method of Claim 17, wherein the reaction is carried out at a temperature of about 80°C.

24. (Canceled)

25. (Canceled)

26. (Currently amended) The isolated polypeptide of Claim ~~8—9—~~, wherein the polynucleotide has the sequence of SEQ. ID NO: 3.

27. (Previously presented) The arabinose isomerase of Claim 16, wherein the arabinose isomerase has the amino acid sequence of SEQ. ID NO: 4.

28. (Canceled)

29. (Previously presented) The arabinose isomerase of Claim 16, wherein the host cell is *E. coli*.

30. (Previously presented) The arabinose isomerase of Claim 16, wherein the host cell is E. coli BL21/DE3 (pTNAI) deposited as Accession No. KCCM-10231.